

Rediscovery of *Uroplatus guentheri* (Reptilia, Gekkonidae)

by Anthony P. RUSSELL and Aaron M. BAUER

Abstract. — A second specimen of *Uroplatus guentheri* is described and compared with the holotype. Habitat details are provided for the first time, including the occurrence of other reptilian and amphibian species in the same area.

Résumé. — Un deuxième spécimen d'*Uroplatus guentheri* est décrit et comparé avec l'holotype dont la provenance à Madagascar était inconnue. Le nouveau sujet vient de l'Ankarafantsika et témoigne ainsi, après *U. fimbriatus*, que le genre (à la faveur des forêts-galeries) n'est pas strictement inféodé à la pluviosylve. Une liste de l'herpétofaune collectée en même temps est fournie.

A. P. RUSSELL, *Department of Biological Sciences, The University of Calgary, 2500 University Drive N.W., Calgary, Alberta, Canada T2N 1N4, and Department of Ichthyology and Herpetology, Royal Ontario Museum, 100 Queen's Park, Toronto, Ontario, Canada M5S 2C6.*

A. M. BAUER, *Department of Biological Sciences, The University of Calgary, 2500 University Drive N.W., Calgary, Alberta, Canada T2N 1N4.*

INTRODUCTION

Until now, the small Madagascan leaf-tailed gecko *Uroplatus guentheri* has been known only from the type specimen, collected early in this century (MOCQUARD, 1908). This single individual, a male, is of unknown provenance. We here document a second specimen of this taxon, from Majunga Province, and discuss some features of its habitat.

The new specimen of *Uroplatus guentheri* (California Academy of Sciences [CAS] 126342 (fig. 2) is a female and corresponds with the holotype (Muséum national d'Histoire naturelle, Paris [MNHN] 07-76) (fig. 1) in most respects. The features distinguishing *U. guentheri* from *U. alluaudi*, as outlined in ANGEL (1929), are clearly present : the rostral scale is cleft and the scales of the venter are heterogeneous. A comparison of selected mensural and meristic features of the two specimens is presented (table 1). Unfortunately CAS 126342 is somewhat poorly preserved. There is loss of some skin and a certain amount of tissue damage in the region of the thighs, vent and palms of the manus.

COLOUR OF THE NEW SPECIMEN

The colour in life of the dorsum of *Uroplatus guentheri* has been determined from a photograph of the living animal, taken by Dr. T. J. PAPENFUSS at Ankarafantsika (fig. 3). The

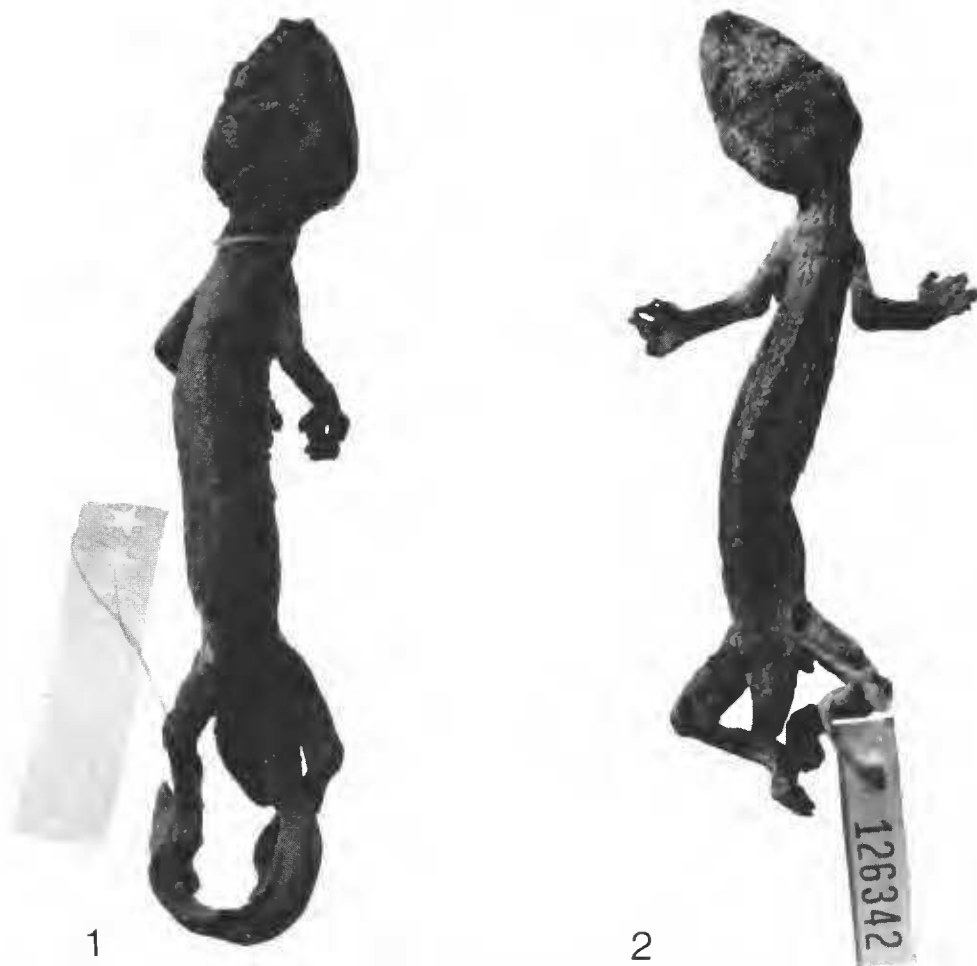


FIG. 1-2. — 1, Holotype of *Uroplatus guentheri*, male (MNHN 1907-76) from « Madagascar »; 2, *Uroplatus guentheri*, female (CAS 126342) from Ankarafantsika Forest, Majunga Province, Madagascar.

head bears a pair of prominent horizontal white stripes in the temporal region; the rostrum is grey-brown with a prominent chocolate brown median rectangle from the rostral scale to the level of the nares; there is a pair of small dark spots between the nares and eyes; a chocolate brown butterfly-shaped patch exists between the orbits; the parietal region is of a lighter brown colour; the trunk and limbs are coffee-coloured with a diffuse pattern of light grey bars and blotches; there is a narrow, broken, dark mid-dorsal stripe from the occiput to the tail base; the mid-dorsal stripe is intersected by seven narrow, dark cross bands; the limbs bear two to three dark cross bands; the tail is mottled and predominantly grey.

In alcohol the dorsum appears mottled brown with white; the pattern is as outlined above, but faded, especially on the head; the venter is greyish with some darker pigmentation below the ear and angle of the jaw as well as on the trunk.



FIG. 3. — Living *Uroplatus guentheri* (CAS 126342) on a tree trunk. Note the disruptive, cryptic coloration and size and shape of the original tail.

GEOGRAPHICAL ORIGIN AND HABITAT DETAILS

The new specimen of *Uroplatus guentheri* was collected in the Ankarafantsika Forest, 15-33 km southeast of Amboromalandy, Majunga Province (16°15' S, 46°55' E) during the period 13-15 July, 1970, by Dr. T. J. PAPENFUSS of the University of California at Berkeley. The area may be characterized as a hardwood gallery forest/savannah mosaic (fig. 4). The specimen of *U. guentheri* was collected at a height of 1.7 m on a vine along a small watercourse in the



FIG. 4-5. — 4, Forest/savannah mosaic of the Ankarafantsika forest region in July, 1970; 5, watercourse in gallery forest of Ankarafantsika, Madagascar. Habitat of *Uroplatus guentheri* and *U. fimbriatus*.

gallery forest (fig. 5). The herpetofauna of the region is highly diverse, this being especially true of the lizards (table 2).

Uroplatus fimbriatus, the largest and most common member of the genus, has been collected at Ankarafantsika (California Academy of Sciences, Stanford University [CAS-SU] 13469). The region is on the periphery of the distribution of the genus (BAUER and RUSSELL, *in press*). As a whole *Uroplatus* appears to be limited to forest areas, especially areas of high rainfall, such as the Madagascan eastern forest belt. No members of the genus have been reliably reported from the more arid regions of western Madagascar. The presence of both *Uroplatus fimbriatus* and *U. guentheri* in the forest/savannah mosaic suggests that leaf-tailed geckos are capable of exploiting a relatively broad range of forest types and that populations might be expected to exist in isolated patches of forest of sufficient size.

TABLE 1. — Comparison of the Ankarafantsika specimen with the holotype of *U. guentheri*. (All measurements in millimetres.)

	MNHN 07-76 Holotype	CAS 126342
Snout-vent length	78.9 (78)	71.6
Tail length	48.9 (48)	7.6*/30.0**
Head length	22.6 (24)	21.7
Head width	16.5 (17)	14.1
Forelimb length	29.8 (24)	24.5
Hindlimb length	41.9 (33)	32.5
Lamellar pairs (digit IV, manus)	7 (7)	7
Supralabials ***	18/18 (16/19)	17/17
Infralabials ***	16/17 (16/18)	18/18
Teeth upper **/lower	50(8)/47	42(8)/38

* Measurements given in parentheses are those provided by ANGEL (1929 : 33), the others are those taken by us from the specimen. * Pygal portion only present. ** Total length estimated from figure 3. ** Parenthetical number refers to premaxillary tooth count; tooth counts are given for one upper and lower jaw quadrant only. *** Counts given are left/right.

TABLE 2. — Herpetological specimens collected in the Ankarafantsika forest, July 1970.

AMPHIBIA

SALIENTIA

RANIDAE

Ptychadena mascareniensis

RHACOPHORIDAE

Boophis tephraeomystax; *Mantidactylus betsileanus*

REPTILIA

CHELONIA

PELOMEDUSIDAE

Erymnochelys madagascariensis; *Pelusios castaneus*

LACERTILIA

GEKKONIDAE

Blaesodactylus [= *Homopholis*] *boivinii*; *Geckolepis maculatus*; *Hemidactylus frenatus*; *Lygodactylus tolampyae*¹; *Phelsuma madagascariensis*¹; *Uroplatus guentheri*

IGUANIDAE

*Oplurus sebae*¹

CHAMAELEONIDAE

Chamaeleo angeli; *Chamaeleo oustaleti*; *Chamaeleo rhinocerus*

CORDYLIDAE

Zonosaurus laticaudatus

SCINCIDAE

Mabuya elegans

SERPENTES

COLUBRIDAE

Mimophis mahfalensis

1. Denotes animals collected in adjacent savannah habitat.

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LITERATURE CITED

- ANGEL, F., 1929. — Contribution à l'étude systématique des lézards appartenant aux genres *Uroplatus* et *Brookesia*. *Mém. Acad. Malgache*, **9**: 1-63.
- BAUER, A. M., and A. P. RUSSELL, *in press*. — A systematic review of the genus *Uroplatus* (Reptilia : Gekkonidae), with comments on its biology. *J. Nat. Hist.*
- MOCQUARD, F., 1908. — Description de quelques reptiles et d'un batracien nouveaux de la collection du Muséum. *Bull. Mus. natn. Hist. nat., Paris*, 1908 : 259-262.

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- M. L. BAUCHOT, Laboratoire d'Ichtyologie générale et appliquée, MNHN, 43, rue Cuvier, 75005 Paris.
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- I. LANDEAU, Laboratoire de Zoologie (Vers), MNHN, 61, rue Buffon, 75005 Paris.
- R. LEGENDRE, Laboratoire de Zoologie (Morphologie et Écologie), Université des Sciences et Techniques du Languedoc, pl. Eugène Bataillon, 34060 Montpellier cedex.
- C. LÉVI, Laboratoire de Biologie des Invertébrés marins et Malacologie, MNHN, 57, rue Cuvier, 75005 Paris.
- R. B. MANNING, Department of Invertebrates Zoology, Smithsonian Institution Washington DC 20560, USA.
- R. H. MILLAR, Dunstaffnage Marine Research Laboratory, Scottish Marine Biological Association, P.O. Box 3, Oban-Argyll, Scotland.
- F. MONNIOT, Laboratoire de Biologie des Invertébrés marins et Malacologie, MNHN, UA CNRS 699, 55, rue Buffon, 75005 Paris.
- G. PASTEUR, Laboratoire de Zoologie, Morphologie et Écologie, Université des Sciences et Techniques du Languedoc, pl. Eugène Bataillon, 34060 Montpellier cedex.
- J. C. QUENTIN, Laboratoire d'Écologie animale et de Zoologie, Université d'Orléans, 45045 Orléans cedex.

- J. RENAUD-MORNAND, Laboratoire de Biologie des Invertébrés marins, MNHN, UA CNRS 699, 57, rue Cuvier, 75005 Paris.
- J. R. RICHARDSON, Museum of Victoria, Natural History Division, 285 Russell Street, Melbourne, Victoria 3000, Australia.
- D. ROBINEAU, Laboratoire d'Anatomie Comparée, MNHN, 55, rue Buffon, 75005 Paris.
- SAINT-GIRONS, Laboratoire d'Évolution des Êtres Organisés, 105, Bd Raspail, 75006 Paris.
- R. STOCKMANN, Laboratoire de Physiologie des Insectes, Université PARIS VI, 7, quai Saint-Bernard, 75005 Paris.

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